

Flood Warning Gages

In the Fall of 2018, following the Spring Creek Fire, the U.S. Forest Service issued its Burned Area Emergency Response (BAER) report describing the much higher than normal burn severity within the scar. http://www.slvlandfill.com/wp-content/uploads/2018/08/BAER-Spring-Fire-Report-2018_-2.pdf

That severity resulted in *hydrophobic* soil, into which rainfall is not absorbed but runs off rapidly – so rapidly that flooding often results below the burn scar. The combination of summer monsoons and hydrophobic hillsides are a real threat to downstream life and property. The Town of La Veta lies only 5 - 7 miles below the scar; in the event of flooding it would have almost no warning. The City of Walsenburg, further downriver from La Veta, would have only a couple hours warning

In conjunction with the Division of Water Resources, the Huerfano County Water Conservancy District (District) began planning to install seven warning gages immediately below the burn scar where they would provide some 30-40 minutes warning to La Veta. Colorado's Chief of Hydrographic Services designed the gages, Colorado Division of Homeland Security and Emergency Management and the Colorado Water Conservation Board provided funding to acquire the gages, Huerfano County Road and Bridge did site preparation, the Water Division 2 Lead Hydrographer and the Water District 16 Water Commissioner handled gage installation, and financial and contract aspects were administered by the District. Very importantly, Colorado's Division of Water Resources Division 2 Engineer has committed to maintain the gages for five years.

Manufactured by Sutron, the iridium gages operate based on radar cameras which measures flood stage (water height) and surface water speed. The cameras are installed several feet above the normal water surface and readings are carried by buried cable to waterproof boxes located on nearby hillsides containing essential instrumentation. The boxes are located above anticipated flood levels. From the boxes, readings are transmitted to a satellite, are publicly available at <http://hydrometcloud.com>, and are updated hourly under normal conditions and every 1.5 minutes during flood conditions. This network of gages is said to be the first of its kind in the nation and should be considered experimental in nature.

When either stage or velocity exceed predetermined thresholds, text messages are sent to decision-makers within La Veta, Walsenburg, and County government. Taken together with other indicators such as National Weather Service notifications and spotter reports, gage readings will provide further guidance for the issuance of evacuation orders.

By early May 2019, gage installation was complete. A few weeks thereafter the gages were fully operational. The warning gages are shown on the [map of warning gage locations](#).

The availability and use of the warning gages, including any flooding notices that may or may be provided by use of the warning gage system, are subject to and provided to the public only under the terms of the following Notice and Disclaimer.